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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,531	05/26/2000	Klaus Tomantschger	36399-0083	7649

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EXAMINER

IP, SIKYIN

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 02/12/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-12

# Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 10/23/02; 11/26/02
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-16, 18-35 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-16, 18-35 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
  - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 20-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. The limitation "up to 20 minutes" in the last line of claim 20 is not supported by the specification originally filed because said limitation has extended the lower limit to include zero minute.

### *Double Patenting*

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3, 6-16, 18-22, and 25-35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6342110 to Palumbo in view of JP 406267544.

6. The Palumbo reference(s) disclose(s) the features including the claimed metallic current collector and cold work and recrystallization annealing. The features relied upon described above can be found in the Palumbo reference(s) at claims 1-6.

The difference between the Palumbo reference(s) and the claims are as follows:

Palumbo does not disclose the cold work to form a battery grid and pasting.

However, JP 406267544 (abstract and CLAIMS) disclose(s) lead alloy battery grid/current collector is known to be cold worked to form battery grids by reciprocating dies or the like, pasting the grids, and recrystallization annealing the pasted grids. JP 406267544 in the MEANS section discloses the cold rolling is done at temperature of 120 °C or less which reads on preheating prior to cold working.

The instant quenching step without recites any manipulate parameters such as cooling rate and temperature; thus, the claimed quenching step reads on cooling the recrystallization annealed battery grid in room temperature.

7. With respect to claim 15, that method or process is an act or a series of acts and from the standpoint of patentability must distinguish over prior art in terms of steps. Ex parte Forsyth and Hancher, 151 USPQ 55, 55.

8. Claims 4-5 and 23-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6342110 to Palumbo in view of JP 406267544 and further in view of USP 5434025 to Rao et al.

9. The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for rotary expansion and punching perforation. However, Rao discloses reciprocating dies (col. 2, lines 60-63), and punching and rotary die (col. 14, lines 36-42) in the same field of endeavor for forming grid mesh. Therefore, as is evinced by Rao that the claimed expansion tools are known in the art of cited references for forming grid mesh. Using conventional tools for its intended utility is within ambit of ordinary skill artisan. In re Venner, 120 USPQ 193 (CCPA 1958) and In re LaVerne, et al., 108 USPQ 335.

#### ***Claim Rejections - 35 USC § 103***

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-16 and 18-35 are rejected under 35 U.S.C. § 103 as being unpatentable over Abdel-Rehem et al or JP 406267544 (abstract, claims, and means sections) in view of USP 3888703 to Tilman et al or USP 4753688 to Myers and further teaching of acknowledged prior art admission in page 2, lines 1-21 of the instant specification.

13. The Abdel-Rehem et al or JP 406267544 reference(s) disclose(s) the features including the claimed lead battery grid material and battery grid forming and heat treatment steps. The features relied upon described above can be found in the Abdel-Rehem et al reference(s) at abstract and JP 406267544 (abstract, claims, and means sections). Abdel-Rehem et al do not disclose the recrystallization conditions, special grain boundaries %, and strip thickness before and after perforation is less than 10%.

JP 406267544 does not disclose the special grain boundaries % and strip thickness before and after perforation is less than 10%. However, Tilman et al (paragraph bridging col. 1 and 2) and Myers (col. 3, line 27 to col. 5, line 12) disclose(s) recrystallization conditions for lead alloys in the same field of endeavor or the analogous metallurgical art. Prior art admission in page 2, lines 1-21 of the instant specification disclose the strip thickness before and after perforation is conventionally less than 10%. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to adapt the lead alloy crystallization conditions as taught by Tilman et al or Myers in order to improve/provide the lead alloy properties. In re Venner, 120 USPQ 193 (CCPA 1958). Accordingly, it would have been prima facie obvious for ordinary skill artisan motivated by a reasonable expectation of success in order to obtain all of the known benefits. In re LaVerne, et al., 108 USPQ 335, and In re Aller, et al., 105 USPQ 233.

14. Acknowledged prior art admission may have pasting between the steps of perforation and annealing. But, it is well settled that merely reversing the order of the steps of a multi-step process does not impart patentability when no unexpected results is obtained. Ex parte Rubin, 128 USPQ 440 (PPOBA 1959) and Cohn v. Comr. Pats., (DCDC 1966) 251 F Supp 378, 148 USPQ 486.

15. Cited references silence about the special grain boundaries, However, the instant lead alloy material and processing steps are overlapped by the cited references; consequently, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In re Best, 195 USPQ, 430 and MPEP 2112.01.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). ‘When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.’ In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977).”

#### ***Response to Arguments***

16. Applicant's arguments filed October 23, 2002 have been fully considered but they are not persuasive.

17. Applicants' argument with respect to the USP '110 is noted. But, applicants do not address the double patenting rejection.



18. Applicants argue that Myers, Tilman, and Abdel-Rehem require strip reduction rate higher than 10%. But, as is evinced by the prior art admission in the page 2, lines 1-5 of the instant specification that the claimed strip thickness before and after perforation is conventional and is different from thickness reduction from forming a strip from a sheet as disclosed by Abdel-Reihim, Myers and Tilman. Moreover, the instant transitional expression does not exclude the reduction steps before perforation step.
19. Applicants' argument with respect to Abdel-Reihim in pages 10-11 of the instant remarks is noted. But, it appears applicants' argument is not based on abstract. So for a fully consideration of applicants' argument, applicants may submit the full copy or translated copy for consideration.
20. Applicants argue that Tilman hot rolling the material at 125°C. But, as is evinced by the JP 406267544 in the section of MEANS, that 120°C is considered cold rolling temperature.
21. Applicants' argument as set forth in paragraph bridging pages 12-13 of the instant remarks is noted. But, applicants' attention is directed to Myers, for example. Myer in col. 5, lines 59-61 discloses forming a battery grid requires forming a rolled sheet, slitting and expanding to form an open grid, and punching out the open grid. So cited references may not use the word "perforation" as recited but they do slit and

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expand their material to form an open battery grid.

*Conclusion*

22. All recited limitations in the instant claims have been met by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.

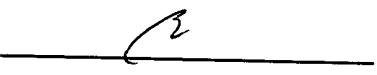
*Examiner Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone number for this Art Unit 1742 are (703) 305-3601 (Official Paper only) and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

  
SIKYIN IP  
PRIMARY EXAMINER  
ART UNIT 1742

S. Ip  
February 10, 2003